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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/857,490	10/01/2001	Federick H. Rumpf	97116CIP-(36	5371

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EXAMINER	
HENDRICKSON, STUART L	
ART UNIT	**PAPER NUMBER**
1754	

DATE MAILED: 08/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/857,490	RUMPF ET AL.	
	Examiner	Art Unit	
	Stuart Hendrickson	1754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 August 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) *9-14* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action. The request filed on 8/2/04 for Continued examination (RCE) is acceptable and has been established.

Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1 line 6, it is not clear which carbon black is meant for 'a' carbon black. It is not clear if the thereby clause merely describes the previously recited language or if it requires something new. If merely descriptive of the process as a whole, it should for clarity be deleted.

Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rothbuhr et al. 4636375.

Rothbuhr teaches in column 8 treating carbon black off-gas to remove water and carbon, then recycling it. While not explicitly teaching heating before recycling, this is suggested in column 9 and thus obvious to increase the carbon yield, and/or efficiency of combustion. The fuel rich mode is suggested as an option in col. 1 and 2. Note that col. 9 line 60-63 shows two examples. The 80 degree example shows less combustion and thus meets the claims, as less product is formed.

Claims 1, 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stokes '402, alone or in view of Rothbuhr.

Stokes teaches in columns 2 and 3 removing carbon and water from carbon black off-gas and recycling. The injection of oxygen is taught. This differs only in not teaching heating the dewatered gas. However, this is deemed to be obvious as a measure to maintain the temperature, in view of maintaining a favorable equilibrium in col. 2 line 12 as well as to maintain a hot combustion zone for efficient burning and carbon formation.

Moreover, Rothbuhr teaches in column 9-10 efficiency gained by preheating the infeeds. Therefore, preheating is an obvious measure to improve economic efficiency. Concerning claim 2, Stokes col. 3 line 50-55 teaches or suggests the fuel rich mode.

Claims 3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stokes '402, alone or with Rothbuhr as applied to claims 1, 2 above, and further taken with Sircar and Doshi respectively.

Stokes teaches removal by adsorption in general- it does not specify PSA. However, Sircar teaches in col. 5 line 55 using PSA to dewater a gas. Thus using it in the process of stokes an obvious expedient to perform the water removal. Concerning claim 8, Stokes does not identify the source of oxygen, however Doshi teaches in column 11 line 5 that it can separate oxygen by PSA. Thus, using oxygen-from any source, such as PSA, is an obvious expedient to create the oxygen used by Stokes.

Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stokes alone or in view of Rothbuhr as applied to claims 1, 2 above, and further in view of Lynum 5527518.

Stokes/Rothbuhr, supra, does not explicitly teach reheating the recycled gas using plasma heating. However Lynum in column 5 teaches this technique to make carbon black. Plasma preheating the gases of Stokes is thus an obvious expedient to assure efficient combustion and restore heat lost during the water-removal steps.

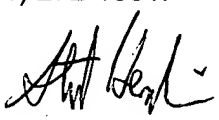
Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morel 3438732.

The reference teaches in col. 4 especially making carbon black and recycling the effluent. Morel differs in not requiring preheating of the inert off-gas, however suggests preheating to optimize efficiency. As the stream is made inert, it does not combust.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to preheat the recycle in the process of Morel because doing so improves the process.

Applicant's arguments filed 8/2/04 have been fully considered but they are not persuasive. The added language does not recite that the present process is fuel rich. Rothbuhr clearly teaches forming carbon black. The arguments seem not to draw a distinction between complete combustion of the fuel, versus an excess of oxygen to react with the feedstock; the arguments are not persuasive as the claims are not clearly limited to the alleged differences. A full mass-balance of the Stokes process should be presented to show the degree of combustion and what mode (lean, rich) is being used therein. PSA is a valid way of making a purified gas, so its use is an obvious expedient to provide the gases required. If gas X is needed by a reference, any reference which teaches a way to make gas X is analogous art, and is obvious to combine- note In re Kamlet 88 USPQ 106. Lynum teaches a temperature of 1200 degrees and suggests that the temperature may be controlled to any desired value.

Any inquiry concerning this communication should be directed to examiner Hendrickson at telephone number (571) 272-1351.



Stuart Hendrickson
examiner Art Unit 1754